UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,080	06/01/2001	Shmuel Shaffer	062891.0583	3128

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EXAMINER
PATEL, JAY P

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _6/1/01_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-23_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-23_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _6/1/01_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

2.   Claims 21 and 23 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. The phrases "logic encoded in media" and "logic

operable to at least" are not particular as to which media is needed to carry out the

functions that are specified by the claims.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hedayat et al. (U.S. Publication 2002/0037371 A1) in further view of Kim (U.S. Patent

6215791 B1).

5.   Regarding claims 1-8, the primary reference (Hedayat) discloses all the

limitations of claims 1-8 including a method of measuring the jitter (claim 1), comparing

the amount of jitter (claim 1), a voice packet (claims 2 and 7), receiving the

measurement of the jitter at first router (claim 6) and that the number of routers

represents the amount of jitter (claim 8). The reference discloses that the system

identifies a particular flow on the network, and time-stamps the packets of that particular

at the controller and at the responder. The system uniquely identifies a packet flow by

monitoring data field of individual packets within the packet flow (Page 3 paragraph 47).

The reference further states how the jitter is measured; "the average jitter J of a flow is

measured by continuously measuring the variance in delay of each successive packet

to the previous packet" (page 4, first column, paragraph 51). The reference

subsequently discloses a formula to do so. In regards to comparing the jitter, the

reference discloses that the method "includes associating a transmit time code with

each of the packets transmitted from the first location, and associating a receive time

code with each of the packets received at the second location. The method also

includes calculating, for each packet, a propagation delay from the first location to the

second location by subtracting the associated transmit time code from associated

receive time code. The method includes calculating, for each pair of consecutive

packets received at the second location, a delay variation as the difference between the

propagation delays calculated for the pair of consecutive packets" (page 1, column 2

paragraph 17). The reference also discloses a formula for the calculation of a delay

variance (page 4 column 1 paragraph 49). The reference also discloses the poor

quality effect that jitter can cause in voice applications such as VoIP (Page 1, first

column, paragraph 12). The reference also indicates that routers, switches and other

network components can introduce variable delays, which add to the jitter as a result of

congestion and other factors (page 1, 1st column paragraph 12).

6.   The primary reference fails to teach the limitations of storing the measurements

(claim 3), optimizing the quality of service (QoS) (claim 4) and prioritizing the timing of

the transmission of a packet of the first media stream based on the result of the

comparison and storing the measurement (claims 1, 5 and 6). The secondary reference

(Kim) teaches the limitation of the prioritizing the timing. Kim also states reasons for

implementing a proper queue management system mainly to ensure that a quality of

service is maintained (column 1 lines 24 through 32). A sequencer compares the

deadline time of a new entry with that of the entries the sequencer has been keeping in

the register. The entry with a smaller deadline time has higher priority. In the case that

the deadline entry is the same, the eligible time is compared and the entry with a

smaller eligible time has higher priority (column 6 lines 15 through 45). The results are

subsequently stored in a register (column 6 lines 8 through 14). The measuring and

comparison steps provided by Hedayat in combination with the prioritizing operation

disclosed by Kim would render the claim subject matter obvious to one skilled in the art.

The proper motivation is to enhance the quality of service for real time transmission

such as voice and end-to-end data flow; which is the objective of the invention disclosed

by Kim.

7.   Claims 9-13 are rejected under 35 U.S.C 103(a) as being unpatentable over

Hedayat et al. (U.S. Publication 2002/0037371 A1) in further view of Kim (U.S. Patent

6215791 B1).

8.   In regards to claims 9-14, the primary reference teaches the limitations of

receiving a measurement of the amount of jitter (claim 9), communicating the jitter to the

first router (claim 10), measuring the amount of jitter associated with the media stream

at the third router (claim 12), communicating the amount of jitter at the third router to the

first router (claim 12), the central server where the receiving and prioritizing occurs

(claim 13), and that the number of routers represents the amount of jitter (claim 14).

The reference discloses and embodiment in Figure 2 with a responder (connected of

the first station), a network (between the responder and the controller) and a controller

(connected to a second station) (Figure 2 and page 3, 2nd column, paragraph 46). Each

of which are a first, second and third router, respectively. A configuration device

communicates the results of the jitter measurements between the responder (first

station) and the controller (second station). The reference discloses that the system

identifies a particular flow on the network, and time-stamps the packets of that particular

flow at the controller and at the responder. The system uniquely identifies a packet flow

by monitoring data field of individual packets within the packet flow (Page 3 paragraph

47). The reference further states how the jitter is measured; "the average jitter J of a

flow is measured by continuously measuring the variance in delay of each successive

packet to the previous packet" (page 4, first column, paragraph 51). The reference

subsequently discloses a formula to do so. A Network configuration device

communicates with the first and the second station and determines which results of the

measurements to collect and report; therefore it serves as a central server. The

reference also indicates that routers, switches and other network components can

introduce variable delays, which add to the jitter as a result of congestion and other

factors (page 1, 1st column paragraph 12).

9.   The primary reference fails to teach the limitations of prioritizing the timing of the

transmission of a packet from the first to the third router (claim 9 and 11). The

secondary reference (Kim) teaches all the above-mentioned limitations. A sequencer

compares the deadline time of a new entry with that of the entries the sequencer has

been keeping in the register. The entry with a smaller deadline time has higher priority.

In the case that the deadline entry is the same, the eligible time is compared and the

entry with a smaller eligible time has higher priority (column 6 lines 15 through 45). The

measuring and comparison steps provided by Hedayat in combination with the

prioritizing operation disclosed by Kim would render the claim subject matter obvious to

one skilled in the art. The proper motivation is to enhance the quality of service for real

time transmission such as voice and end-to-end data flow; which is the objective of the

invention disclosed by Kim.

10.   Claims 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hedayat et al. (U.S. Publication 2002/0037371 A1) in further view of Kim (U.S. Patent

6215791 B1).

11.   In regards to claims 15-19, the primary reference (Hedayat) teaches the

limitations of measuring the amount of jitter in a first router (claim 15), comparing the

amount of jitter received with at least the amount of jitter from another media stream

(claim 15), receiving at the first router a measurement with respect to the third router

(claim 15), measuring the jitter at the third router (claim 16) and that the number of

routers represents the amount of jitter (claim 19). The reference discloses and

embodiment in Figure 2 with a responder (connected of the first station), a network

(between the responder and the controller) and a controller (connected to a second

station) (Figure 2 and page 3, 2nd column, paragraph 46). Each of which are a first,

second and third router, respectively. A configuration device communicates the results

of the jitter measurements between the responder (first station) and the controller

(second station). The reference discloses that the system identifies a particular flow on

the network, and time-stamps the packets of that particular flow at the controller and at

the responder. The system uniquely identifies a packet flow by monitoring data field of

individual packets within the packet flow (Page 3 paragraph 47). The reference further

states how the jitter is measured; "the average jitter J of a flow is measured by

continuously measuring the variance in delay of each successive packet to the previous

packet" (page 4, first column, paragraph 51). The reference subsequently discloses a

formula to do so. In regards to comparing the jitter, the reference discloses that the

method "includes associating a transmit time code with each of the packets transmitted

from the first location, and associating a receive time code with each of the packets

received at the second location. The method also includes calculating, for each packet,

a propagation delay from the first location to the second location by subtracting the

associated transmit time code from associated receive time code. The method includes

calculating, for each pair of consecutive packets received at the second location, a

delay variation as the difference between the propagation delays calculated for the pair

of consecutive packets" (page 1, column 2 paragraph 17). The reference also discloses

a formula for the calculation of a delay variance (page 4 column 1 paragraph 49). The

reference also discloses the poor quality effect that jitter can cause in voice applications

such as VoIP (Page 1, first column, paragraph 12). The reference also indicates that routers, switches and other network components can introduce variable delays, which add to the jitter as a result of congestion and other factors (page 1, 1st column paragraph 12).

12.   The primary reference fails to teach the limitations of prioritizing the timing of the transmission between the first and the third router (claims 15 and 18), storing the measurement of the jitter (claim 15) and optimizing quality of service (claim17). The secondary reference (Kim) teaches all the above-mentioned limitations. Kim teaches the limitation of the prioritizing the timing. Kim also states reasons for implementing a proper queue management system mainly to ensure that a quality of service is maintained (column 1 lines 24 through 32). A sequencer compares the deadline time of a new entry with that of the entries the sequencer has been keeping in the register. The entry with a smaller deadline time has higher priority. In the case that the deadline entry is the same, the eligible time is compared and the entry with a smaller eligible time has higher priority (column 6 lines 15 through 45). The results are subsequently stored in a register (column 6 lines 8 through 14). The measuring and comparison steps provided by Hedayat in combination with the prioritizing operation disclosed by Kim would render the claim subject matter obvious to one skilled in the art. The proper motivation is to enhance the quality of service for real time transmission such as voice and end-to-end data flow; which is the objective of the invention disclosed by Kim.

13.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hedayat

et al. (U.S. Publication 2002/0037371 A1) in further view of Kim (U.S. Patent 6215791

B1).

14.   In regards to claim 20, all the relevant prior art discloser taken individually or in

combination used in the rejection of claim 1 is also applied to this claim.

15.   Claim 22 is rejected under 35 U.S.C 103(a) as being unpatentable over Hedayat

et al. (U.S. Publication 2002/0037371 A1) in further view of Kim (U.S. Patent 6215791

B1).

16.   In regards to claim 22, all the relevant prior art discloser taken individually or in

combination used in the rejection of claim 9 is also applied to this claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RICKY NGO
PRIMARY EXAMINER

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Examiner
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